



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

52

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/046,868

01/15/2002

Michael L. Santori

5150-64600

5724

35690

7590

04/27/2005

MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.

P.O. BOX 398

AUSTIN, TX 78767-0398

EXAMINER

HUYNH, BA

ART UNIT

PAPER NUMBER

2179

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/046,868

Applicant(s)

SANTORI ET AL.

Examiner

Ba Huynh

Art Unit

2179

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 and 33-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 and 33-68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-31, 33-68 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-69 of copending application No. 10/047,014, and claims 1-60 of copending application 10/046,861. Although the conflicting claims are not identical, they are not patentably distinct from each other because they all share the same concept of invention and similar claim limitations, e.g., executing a first graphical program, executing a second graphical program, displaying both an interface element of the first graphical program and an interface element of the second graphical program in a single graphical user interface.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

NOTE: The applicant intention of filing a terminal disclaimer is noted.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-31, 33-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Publication 2001/0034881 (Washington).

- As for claims 1, 5, 21, 22, 46, 60-63, 66, 68: Washington teaches a computer implemented method and corresponding system for simulating a product being design, comprising a Graphical Program Generator GPG for creating a graphical program that models the product being designed (0109), or creating a graphical program that perform a measurement function (0110), or creating a plurality of graphical programs for different type of operations (0119). The GPG supports multiple graphical development environment (0126) and adaptable to create any graphical program of various purposes (0106). The simulation includes the steps/means for:
 - creating a first graphical program that models the product being designed, in a first graphical development environment (0093, 0098, 0109)
 - deploying the first graphical program on a target device for execution (0090, 0122),
 - creating a second graphical program that perform a measurement function, in a graphical development environment different from the first environment (0110, 0126, 0165),

Art Unit: 2179

coupling the target device to a physical system (fig. 2),
executing the first graphical program on the target device to simulate operation of the product, wherein the target device interact with the physical system (0090, 0122, fig. 2),

executing the second graphical program to measure operation characteristic of a physical system and/or a product (0110, 0162, 0165).

Washington's disclosure is not clear regarding the displaying one or more elements of the first and second graphical program in a same graphical user interface. However since the GPG support multiple graphical programs created in different graphical development environments, it is within the capability of the GPG to display one or more elements of the first and second graphical program in a same graphical user interface. In light of Washington teaching of generating multiple graphical programs and measuring performance of a being modeled physical system, it would be naturally desirable to have a single GUI on which the user can control or monitor operations of the concurrently running multiple graphical programs. Thus it would have been obvious to one of skill in the art, at the time the invention was made, to implement the execution of the second graphical program concurrently with the first one to measure operation performance of the being modeled physical device, and displaying of one or more elements of the first and second graphical program in a same graphical user interface, such as a front panel, to Washington, which implementation enables the user to control or monitor operations of the first and second graphical programs.

- As for claims 2, 3: In light of the combining set forth above, the user interface element of the first graphical program displays a parameter related to operation of the first graphical program (fig. 32), wherein the parameter affect operation of the product being designed (0176).
- As for claims 4, 48: In light of the combining set forth above, input can be provided to a user interface element of the first graphical program to adjust operation of the first graphical program during execution of the program (0149, 0154).
- As for claims 6, 49: In light of the combining set forth above, input can be provided to a user interface element of the second graphical program to adjust operation of the second graphical program during execution of the program (0176, 0197).
- As for claims 7, 8: Computer 102 is coupled to the target device (figure 2). The second graphical program is executed on the computer 102 to measure operational characteristics of the target device (0069, 0070, 0077).
- As for claims 9, 10, 65: Computer 102 is coupled to the physical system (figure 2). The second graphical program is executed on the computer 102 to cause the computer to interface with the physical system through an instrument to measure operational characteristics of the target device (0069-0079).
- As for claims 11, 12: The first graphical program is transferred from the first computer system to the target device, wherein the target device is a board comprised in a slot of the first computer system (0069-0079, 0090), wherein the target device is external to the computer 102 (fig. 2).

- As for claim 13: The first graphical program is stored in a memory of the target device (0090).
- As for claims 14, 51: The memory of the target device stores a graphical program execution engine for executing graphical programs created in the first graphical development environment (0090).
- As for claim 15: The graphical program is converted to machine language code (0011) and stored in the target device memory (0090).
- As for claim 16: The first graphical program can be converted to text-based programming language (0094, 0127), compiling the text-based language to machine language (0011) and stored in the target device memory (0090).
- As for claims 17, 52: The target device includes programmable hardware element (0078, 0090). The first graphical program is converted to a hardware configuration program and configuring the programmable hardware element according to the hardware configuration program (0060, 0090, 0121, 0122).
- As for claims 18, 47, 67: The target device controls operations of the physical system (fig. 2).
- As for claim 19: Figure 2 discloses a plurality actuators (“actuator”: one that activates) coupled between the computer and the physical system for controlling the physical system.
- As for claim 20: The first and second graphical user interface elements are assembled on the display responsive to user input (0093, 0100, 0111).

- As for claims 23-29, 53: In light of the combining set forth above, the front panel can be created in either the first or second graphical program, and can be populated with GUI elements selected from either the first graphical program, the second graphical program, or both.
- As for claims 30-31: In light of the combining set forth above, the front panel comprises GUI elements for receiving user inputs and providing corresponding outputs.
- As for claims 33-34, 45, 54, 55: The second graphical program measures operation characteristics of the physical system, which is usable in analyzing operation of the product.
- As for claims 35, 36, 56, 57: Each of the first and second graphical programs comprises interconnected nodes which visually indicate functionality of the graphical programs (0133).
- As for claims 37-38: Each of the first and second graphical programs comprises a block diagram (0092).
- As for claims 39, 40, 58: Each of the first and second graphical programs comprise a data flow diagram (0133).
- As for claim 41-42: The graphical programs can be implemented by a LabVIEW or a Simulink (0126), which comprise a LabVIEW or a Simulink diagram, respectively.
- As for claims 43, 59: The method performs a rapid control prototyping simulation (0124).

Art Unit: 2179

- As for claim 44: The product being designed comprises a front panel (see the rejection of claim 1), a computer 102 (0070), and a PLC (0078).
- As for claim 64: Signal from the physical system is provided to the second graphical program (0070-0072).

Response to Arguments

Applicant's arguments filed 1/10/05 have been fully considered but they are not persuasive.

REMARKS:

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Washington is an improvement over Kodosky, wherein it has been known in Kodosky that a diagram may have more than one data flow and execution flow representations running concurrently (0008). Combining Kodosky's teaching of concurrent running of data flow to Washington would have been obvious in light of Washington. Furthermore, it should be noted that each node itself generates a data flow, and a diagram of connected nodes comprises multiple data flow (or subset of data flow) running concurrently (0011). Even furthermore, since Washington explicitly teach multiple graphical program simulations (0119, 0121), and since

Art Unit: 2179

MDI is well known in the art wherein multiple documents can be displayed in a single GUI. It would have been obvious to one of skill in the art, to implement the displaying of Washington multiple graphical program in an MDI interface wherein multiple simulation can be view concurrently in a single interface.

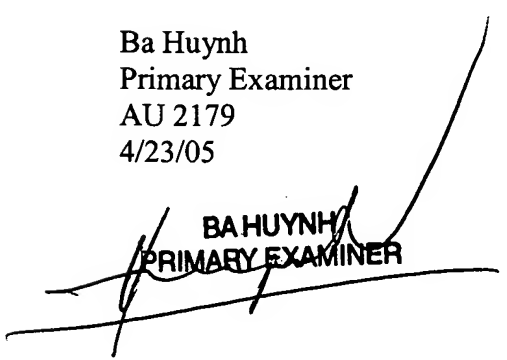
The applicant's indication of future filing a 1.131 declaration is noted.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ba Huynh whose telephone number is (703) 305-9794 (after 10/12/04: (571) 272-4138). The examiner can normally be reached on Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on (703) 308-5186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ba Huynh
Primary Examiner
AU 2179
4/23/05


BA HUYNH/
PRIMARY EXAMINER